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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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ALEXANDRIA, VA 22314

EXAMINER

NGUYEN, NINH H

ART UNIT PAPER NUMBER

3745

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/790,116

Applicant(s)

MARCHI ET AL.

Examiner

Ninh H. Nguyen

Art Unit

3745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,3/1, 3/2, 10/1,10/2, 11/1,11/2, 12/1, and 12/2 is/are rejected.
- 7) ☒ Claim(s) 4-8, 9/1-9/8, 10/3-10/8, 11/3-11/8, and 12/3-12/8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 05/12/04, 07/08/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Art Unit: 3745

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because:

On line 1 of the abstract, "The invention concerns" should be deleted.

At the end of the abstract, "Figure 2." should be deleted.

Correction is required. See MPEP § 608.01(b).

Claim Objections

2. Claims 4-8, 9/3-9/8, 10/3-10/8, 11/3-11/8, and 12/3-12/8 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1,2, 3/1, 3/2, 10/1, 10/2, 11/1, 11/2, 12/1, and 12/2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steel (4,317,646) over Bobo (5,088,888).

Steel discloses a turbomachine (Figs. 1-3) comprising a casing 14a and 14b, a rotor, a cooled ring 18 situated between the casing and the rotor, the ring comprising a main cooling

Art Unit: 3745

cavity (between plates 40 and 26a; Fig. 3) and being attached to the turbine casing by means of fastening devices 17 (Fig. 3) wherein the fastening devices comprise a clamping screw positioned generally radially and pinning the ring segment against the casing and the clamping screw is crossed through by a cooling airway that communicates with the main cooling cavity of the ring (Fig. 3);

wherein the clamping screw is crossed longitudinally by a single cooling airway (Fig. 3);

wherein the fastening devices comprise a spacer (Fig. 3, next to the bore 34) mounted on the casing and through which the clamping screw passes; and

wherein the ring also comprises a secondary cooling cavity (Fig. 3, below plate 26a) separated from the main cooling cavity by a panel, the main and secondary cavities being radially superimposed.

However, Steel does not disclose the cooled ring comprises a plurality of ring segments as claimed.

Bobo teaches a turbine (Figs. 1, 2) having a plurality of cooled ring segments 41 formed by shroud hanger segments 28 and shroud segments 26 (Fig. 1) wherein the ring segments 41 are connected to each other by seal strips 54 (Fig. 2).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made, to make turbomachine of Steel with the cooled ring comprises a plurality of ring segments and connecting the ring segments with seal strips for the ease of assembling the ring inside the turbine casing and to prevent leakage between the rings as commonly done in the art.

Allowable Subject Matter

5. Claims 9/1 and 9/2 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior Art

The prior art made of record but not relied upon is considered pertinent to applicant's disclosure and consists of 1 patent.

Gabriel et al. (3,864,056) is cited to show a cooled turbine shroud.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Ninh Nguyen whose telephone number is (571) 272-4823. The examiner can be normally reached on Monday-Friday from 7:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look, can be reached at (571) 272-4820. The fax number for this group is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

Art Unit: 3745

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, please go to <http://pair-direct.uspto.gov> or contact the Electronic Business center (EBC) at 866-217-9197 (toll-free).



NINH H. NGUYEN
PRIMARY EXAMINER

Nhn
July 8, 2005